In the Claims:

1. (Currently Amended) A method of detecting ~~packets~~ a packet in a communication channel comprising:

(a) sampling the communication channel at a first sampling rate to produce a sequence of samples;

(b) correlating at least one sample of the sequence of samples from step [[a]] (a) with one or more samples of the sequence of samples from step [[a]] (a) to generate a plurality of correlation results;

(c) computing a correlation value from the plurality of correlation results;

(d) comparing the correlation value with a threshold; and

(e) sampling the communication channel at a second sampling rate based on and changed by the result of the comparison, wherein the second sampling rate has a different power consumption level than the first sampling rate.

2-3. (Canceled)

4. (Original) The method of claim 1, wherein the first sampling rate is sufficient to accurately recover data encoded in the packet.

5. (Original) The method of claim 1, wherein the second sampling rate is greater than the first sampling rate.

6. (Original) The method of claim 5, wherein the second sampling rate is an integer multiple of the first sampling rate.

7. (Original) The method of claim 5, wherein the second sampling rate is an integer multiple of a minimum sampling rate required to accurately recover data encoded in the packet.

8. (Currently Amended) The method of claim 1, wherein the second sampling step occurs only if the correlation ~~result~~ value exceeds the threshold.

9. (Currently Amended) The method of claim 1, wherein the method further ~~comprising:~~ comprises:

(f) decoding the packet;

(g) processing any data encoded in the packet; and

(h) repeating steps (a)-(e).

10. (Currently Amended) The method of claim 9, wherein following the processing step, the method further ~~comprising the~~ comprises a step of changing the second sampling rate back to the first sampling rate after the completion of processing the packet.

11. (Currently Amended) The method of claim 9, wherein following the processing step, the method further ~~comprising the~~ comprises a step of stopping the processing of the packet and changing the second sampling rate back to the first sampling rate after determining an erroneous detection of the packet.

12. (Currently Amended) The method of claim 1, wherein a receiver is detecting the presence of the packet, and wherein the method further ~~comprising:~~ comprises:

(f) decoding the packet;

(g) determining an intended recipient of the packet;

(h) processing any data encoded in the packet if the intended recipient and the receiver are the same; and

(i) repeating steps ~~(a)-(i).~~ (a)-(h).

13. (Currently Amended) The method of claim 1, wherein the ~~correlation~~ correlating step is performed after a new sample is produced.

14. (Currently Amended) The method of claim 1, wherein the ~~correlation~~ correlating step is performed after a specified number of new samples are produced.

15. (Currently Amended) A receiver for a communications system comprising:

a signal detector, the signal detector containing circuitry to detect signals transmitted on a communications channel;

a sampler coupled to the signal detector, the sampler containing circuitry to sample the signals detected on the communications channel by the signal detector at a variable sampling rate and produce a sequence of samples, wherein the sampler samples the communications channel at a first sampling rate when attempting to detect a packet and at a second sampling rate when [[a]] the packet has been detected, wherein the second sampling rate has a different power consumption level than the first sampling rate;

a correlator coupled to the sampler, the correlator containing circuitry to compare

samples in the sequence of samples from the sampler and produce a correlation value based on the comparison, wherein the correlator is configured to correlate the sequence of samples with itself; and

a processor coupled to the correlator and the sampler, the processor containing circuitry to detect the presence of [[a]] the packet based on results produced by the correlator, decode and process data contained in [[a]] the packet transmitted on the communications channel, and to control and change the sampling rate of the sampler;

wherein the sampler ~~comprising:~~ comprises

a latch coupled to the signal detector, the latch containing circuitry to capture a signal value at a first input and produce a sample corresponding to the captured signal value at an output; and

a sampling clock coupled to the latch and the processor, the sampling clock containing circuitry to control the sampling rate of the sampler based on control information from the processor.

16. (Currently Amended) The receiver of claim 15, wherein the processor changes the sampling rate back to the first sampling rate after [[the]] completed reception of the packet.

17. (Original) The receiver of claim 15, wherein the processor changes the sampling rate back to the first sampling rate after the processor determines that the packet was destined for a different receiver.

18. (Original) The receiver of claim 15, wherein the processor changes the sampling rate back to the first sampling rate after determining an erroneous detection of the packet.

19. (Currently Amended) A communications device comprising:

a transmitter to transmit information from the communications device;

a receiver to receive information sent to the communications device, the receiver ~~comprising:~~ comprising

a signal detector, the signal detector containing circuitry to detect signals transmitted on a communications channel;

a sampler coupled to the signal detector, the sampler containing circuitry to sample the signals detected on the communications channel by the signal detector at a variable sampling rate and produce a sequence of samples, wherein the sampler samples the communications channel at a first sampling rate when attempting to detect a packet and at a second sampling rate when [[a]] the packet has been detected, wherein the second sampling rate has a different power consumption level than the first sampling rate;

a correlator coupled to the sampler, the correlator containing circuitry to compare samples in the sequence of samples from the sampler and produce a correlation value based on the comparison, wherein the correlator is configured to correlate the sequence of samples with itself; and

a processor coupled to the correlator and the sampler, the processor containing circuitry to decode and process data contained in [[a]] the packet transmitted on the communications channel and to control and change the sampling rate of the sampler;

wherein the sampler ~~comprising:~~ comprises

a latch coupled to the signal detector, the latch containing circuitry to capture a signal value at a first input and produce a sample corresponding to the captured signal value at an output; and

a sampling clock coupled to the latch and the processor, the sampling clock containing circuitry to control the sampling rate of the sampler based on control information from the processor.

20. (Original) The communications device of claim 19, wherein the signal detector is a sensor capable of detecting wirelessly transmitted signals.

21. (Original) The communications device of claim 19, wherein the signal detector is a sensor capable of detecting signals transmitted on a wireline communications channel.

22. (Currently Amended) [[A]] The method according to claim 1, wherein a first plurality of samples is correlated with one or more pluralities of samples to generate the plurality of correlation results.

23-24. (Cancelled)

25. (Currently Amended) [[A]] The method according to claim 1, wherein the computing the correlation value comprises:

summing the plurality of correlation results.